

Proton Driver Study II: Preliminary Parameter List

(January 17, 2002)

Main Injector and Beamline Upgrade

Circumference (m)	3319.419
Injection kinetic energy (GeV)	8
Extraction kinetic energy (GeV)	120
Protons per cycle	1.5×10^{14}
Repetition rate (Hz)	0.67
Protons per second	1×10^{14}
Average beam current (μ A)	16
Target beam power (MW)	1.9
RF frequency (MHz)	53
Number of bunches	504
Protons per bunch	3×10^{11}
Dispersion in the straight sections	0
Transition γ_t	21.8
Revolution time (μ s)	11.2
Normalized transverse emittance (mm-mrad)	40π
Longitudinal emittance (95%, eV-s)	0.2
Momentum acceptance	$\pm 0.7\%$
Dynamic aperture	$> 80 \pi$
